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**Programme Specification**

**Title of Course: FdSc Animal Science**

**Date Specification Produced: January 2017**

**Date Specification Last Revised: July 2022**

This Programme Specification is designed for prospective students, current students, academic staff and potential employers. It provides a concise summary of the main features of the programme and the intended learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. More detailed information on the teaching, learning and assessment methods, learning outcomes and content of each module can be found in the Course Handbook and Module Descriptors.

*Examples of completed programme specifications can be found on the* [*KU Programme Specification Archive*](http://www.kingston.ac.uk/programme-specifications/)**SECTION 1: GENERAL INFORMATION**

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| **Title:** | FdSc Animal Science |
| **Awarding Institution:** | Kingston University |
| **Teaching Institution:** | Guildford College |
| **Location:** | Merrist Wood Campus |
| **Programme Accredited by:** | N/A |

**SECTION 2: THE PROGRAMME**

1. **Programme Introduction**

The Animal Science Foundation Degree provides a fascinating insight into the internal workings of many animal species. Animal science focuses on the scientific disciplines that underpin the management of captive, productive and companion animals. This will include but not be limited to animal health, biology, behaviour, nutrition and anatomy. Through academic course-based delivery, supported by integrated professional development, students will be able to engage with National Occupational Standards (NOS) and enhance their employment opportunities. Study of the subject area can open a broad range of career pathways within but not limited to the nutrition, health and research industries.

Assessments are designed to allow students to research into their topics and species of interest and subject areas they would wish to specialise in. The teaching team undertake vocational continuous professional development to keep up to date with their subject specialism. This vocational currency gives a real edge to course content and value is added through guest speakers, visits and realistic work-based learning assignments. These are shared with our colleagues employed within the animal behaviour and welfare sector to ensure that we remain agile and focused on the needs and skills required by the industry.

Teaching and learning takes place on the 400 acre Merrist Wood campus and is supported by an extensive animal collection that is utilised throughout the course where learners will encounter a range of familiar and unusual species. An investment of £4.5 million was put into the animal facilities; culminating the opening of a state-of-the-art Animal Management Centre in September 2015. This centre provides excellent facilities including desert; tropical and nocturnal biomes housing a wide range of exciting species both exotic and domestic. Some of these are of conservation importance; including our red squirrels which are part of a British reintroduction programme.

Foundation degree students utilise the animals for practical work including enrichment, training and investigative projects. Popular species for these include our meerkats, pigs, birds of prey and parrots. This will give opportunities for the development of further practical and research skills in a realistic working environment. The Merrist Wood Animal Management Unit is a member of the International Species Information System (ISIS); our educational licence allows our students to experience first-hand the software used to manage global species populations using the Zoological Information Management System (ZIMS). It is anticipated that the college will gain a Zoo Licence in 2017 allowing the collection to expand further. The college is also equipped with science laboratories to facilitate experiments required to achieve learning objectives.

On completion of the course students are equipped with the knowledge and skills necessary to support the start of their career in this competitive sector of the animal industry, or to support progression onto a relevant BSc (Hons) top-up course. Merrist Wood College is planning to expand its BSc (Hons) top-up for in-take in 2019 which would offer additional progression routes for students on this programme. Our graduates can be found working in a range of animal collections, welfare organisations and educational establishments.

1. **Aims of the Field/Course**

The main aims of the field are to:

1. achieve a recognised level five qualification and provide excellence in terms of industry standards to prepare the learner for employment, or progress to a full honours degree qualification.
2. enable learners to develop skills for independent work and learning.
3. create opportunities for learners to gain practical experience with a wide range of animal species and laboratory techniques.
4. introduce learners to a breadth of topics related to the animal sciences.
5. allow learners the opportunity to explore a range of career areas within the animal science industries and develop aspirations in chosen fields through the use of professional development and module delivery.
6. **Intended Learning Outcomes**

The course provides opportunities for students to develop and demonstrate knowledge and understanding specific to the subject, key skills and graduate attributes in the following areas. The programme outcomes are referenced to the QAA subject benchmark for Agriculture, Horticulture, Forestry, Food, Nutrition and Consumer Sciences (July 2016), the Foundation Degree Qualification Benchmark (May 2010) and relate to the typical student.

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| **Programme Learning Outcomes** |
|  | **Knowledge and Understanding**On completion of the course students will be able to: |  | **Intellectual Skills**On completion of the course students will be able to |  | **Subject Practical Skills**On completion of the course students will be able to |
| A1 | Draw from theory, practicals, investigations, and application of principles to develop knowledge and understanding of animal behaviour in a range of species. | B1 | Recognise and apply theory, concepts and principles from diverse disciplines appropriately. | C1 | Collect and record information or data from primary or secondary sources, summarising it using appropriate qualitative and quantitative techniques.  |
| A2 | Demonstrate understanding of the fundamental concepts, principles and theories of animal science. | B2 | Critically analyse information synthesising and summarising the outcomes.  | C2 | Devise, plan and undertake investigations in a responsible and safe manner, paying due attention to risk assessment, rights of access, relevant health and safety regulations, legal requirements and sensitivity to impact of investigations on the environment and stakeholders.  |
| A3 | Demonstrate detailed knowledge of anatomical and physiological principles and relate to animal health & disease. | B3 | Apply knowledge and understanding to address both familiar and novel problems. | C3 | Appreciate and analyse animal behaviour and husbandry information and use in decision making leading to enhanced welfare standards.  |
| A4 | Apply knowledge of animal nutrition to maximise health and performance of species. | B4 | Utilise research skills that enhance contribution to the animal industry. | C4 |  Plan and execute safely a series of laboratory and field based experiments and procedures. |

In addition to the programme learning outcomes identified overleaf, the programme of study defined in this programme specification will allow

students to develop a range of Key Skills as follows:

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| **Key Skills** |
| **Self Awareness Skills** | **Communication Skills** | **Interpersonal Skills** | **Research and information Literacy Skills** | **Numeracy Skills** | **Management & Leadership Skills** | **Creativity and Problem Solving Skills** |
| Take responsibility for own learning and plan for and record own personal development | Express ideas clearly and unambiguously in writing and the spoken work | Work well with others in a group or team | Search for and select relevant sources of information | Collect data from primary and secondary sources and use appropriate methods to manipulate and analyse this data | Determine the scope of a task (or project) | Apply scientific and other knowledge to analyse and evaluate information and data and to find solutions to problems |
| Recognise own academic strengths and weaknesses, reflect on performance and progress and respond to feedback | Present, challenge and defend ideas and results effectively orally and in writing | Work flexibly and respond to change | Critically evaluate information and use it appropriately | Present and record data in appropriate formats | Identify resources needed to undertake the task (or project) and to schedule and manage the resources | Work with complex ideas and justify judgements made through effective use of evidence |
| Organise self effectively, agreeing and setting realistic targets, accessing support where appropriate and managing time to achieve targets | Actively listen and respond appropriately to ideas of others | Discuss and debate with others and make concession to reach agreement | Apply the ethical and legal requirements in both the access and use of information | Interpret and evaluate data to inform and justify arguments | Evidence ability to successfully complete and evaluate a task (or project), revising the plan where necessary |  |
| Work effectively with limited supervision in unfamiliar contexts |  | Give, accept and respond to constructive feedback | Accurately cite and reference information sources | Be aware of issues of selection, accuracy and uncertainty in the collection and analysis of data | Motivate and direct others to enable an effective contribution from all participants |  |
|  |  | Show sensitivity and respect for diverse values and beliefs | Use software and IT technology as appropriate |  |  |  |

1. **Entry Requirements**

The minimum entry qualifications for the programme are:

From A levels: 64 UCAS points

BTEC National: 64 UCAS points from Level 3 Animal/Equine Management/Science

Access Diploma: 64 UCAS points from Access to HE Animal Management or Science

Plus: English, Maths and Science GCSE grade A\*-C

 It is advantageous to have biology or psychology A level

A minimum IELTS score of 6 with minimum of 5.5 in any component is required for those for whom English is not their first language.

1. **Field/Course Structure**

This programme is offered in full-time and part-time mode, and leads to the award of Foundation Degree. Full-time delivery is typically two days per week on-site and one day per week for part-time. Entry is normally at Level 4 with A-level or equivalent qualifications (See section D). Transfer from a similar course is possible at Level 5 with passes in comparable Level 4 modules – but is at the discretion of the course team and subject to Kingston University regulations. Intake is normally in September.

**E1. Professional and Statutory Regulatory Bodies**

N/A

**E2. Work-based learning, including sandwich courses**

Work based learning is an essential component of the Foundation Degree and each student must complete 200 hours at level 4 and again at level 5. This is assessed through a 30 credit Professional Development in the workplace module at each level. It is the responsibility of individual students to source and secure such work-based learning experiences. This allows students to reflect upon their own personal experience of working in an applied setting, to focus on aspects of this experience that they can clearly relate to theoretical concepts and to evaluate the relationship between theory and practice. A designated work placement coordinator ensures not only that the selected work placement complies with the required health and safety legislative framework, but is also there to support students in problem solving in order to find a suitable placement. Students will have access to a wide range of potential placements from an approved database of employers but will be encouraged to find their own. There are opportunities to work at both the Animal Management and Equine Centre if deemed applicable by the centre managers.

**E3. Outline Programme Structure**

Each level is made up of four modules each worth 30 credit points. Typically a student must complete 120 credits at each level. All students will be provided with the University regulations and specific additions that are sometimes required for accreditation by outside bodies (e.g. professional or statutory bodies that confer professional accreditation). Full details of each module will be provided in module descriptors and student module guides.

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| **Level 4** (all core) |
| **Compulsory modules** | **Module code** | **Credit** **Value** | **Level**  | **Teaching Block** |
| Animal health, welfare and nutrition | SG4032 | 30 | 4 | 1&2 |
| Professional development in the work environment 1 | SG4031 | 30 | 4 | 1&2 |
| Animal behaviour | SG4034 | 30 | 4 | 1&2 |
| Fundamentals of animal science | SG4035 | 30 | 4 | 1&2 |

Progression to Level 5 requires 120 credits including passes in all Level 4 modules.

Students exiting the field/course at this point who have successfully completed 120 credits are eligible for the award of Certificate of Higher Education in Animal Science.

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| **Level 5**  |
| **Compulsory modules** | **Module code** | **Credit** **Value** | **Level**  | **Teaching Block** | **Pre-requisites** |
| Professional development in the work environment 2 | SG5021 | 30 | 5 | 1&2 | Professional development in the work environment 1 |
| Research methods | SG5022 | 30 | 5 | 1&2 |  |
| Advanced animal nutrition | SG5027 | 30 | 5 | 1&2 |  |
| Comparative anatomy and physiology  | SG5028 | 30 | 5 | 1&2 | Fundamentals of animal science |

1. **Principles of Teaching, Learning and Assessment**

The Foundation Degree in Animal Science is designed to develop a student’s knowledge, understanding, cognitive skills, practical skills and key transferable skills at Level 4 and Level 5 and as a suitable progression into Level 6 honours level in an appropriate discipline. A variety of teaching and learning strategies are employed to include formal lectures, group discussion, seminars, individual study, independent research, practical workshops and field work. Where appropriate guest speakers and a range of working environments are used to support the learning.

Equality and diversity is fully embedded within the content and delivery of the course giving an inclusive programme for the learner. Diversity is represented, for example, through cultural differences in perception to animals and their role in society. This will give a wider appreciation of faith, culture and our complex relationship with animals particularly in a time where social media is used as a tool to share information rapidly that may lack scientific validity or credibility. Equality is a fundamental value of our teaching and learning, with all learners having the ability to demonstrate academic and practical strengths and develop further through support and self-directed study. This can be facilitated through feedback and tutorial support for all. The practical nature of this module and specific nature of the programme may mean that a range of industry experience will be present in the cohort. Peer learning, small study groups and evaluation of the latest industry advances will allow inclusion in the development of employability skills for the cohort. A range of teaching styles and activities will be used to reflect the diversity of the groups learning needs.

A sound appreciation of ethics will be considered throughout the course through application to pertinent and current case studies that have impacted on the industry, such as the use of animals for scientific experimentation. This will allow a greater appreciation of the animal industry and will provide the learner with information to make valued and considered judgements.

The programme has been designed to extend the academic knowledge and understanding through application to the workplace environment and through the development of vocational skills and competencies. Consideration has been given to the balance of intellectual and practical skills. Throughout the field emphasis is placed on developing self-awareness skills, communication skills, interpersonal skills, research and information literacy skills, numeracy skills, management and leadership skills and creativity and problem solving skills.

All students are provided with an opportunity to gain experience in a related workplace setting through the Professional Development Modules in levels 4 and 5. Expectations of the student experience in the workplace are fully articulated at the commencement of the placement. This is by means of a workplace learning contract / agreement and handbook/feedback for employers. The modules relating to Professional Development in the Work Environment provide a mechanism for students to identify and apply self-awareness techniques for their own skill development and create a professional development plan to support career choices.

Students are encouraged to recognise the workplace as a learning environment and to apply the knowledge and skills gained to the other fields of study and taught modules. Although learners may have specific career paths and aims, the programme has been designed to reflect the necessary skills development leading to the autonomy required should they progress to level 6. By liaising with industry professionals we have developed a programme with a sound grounding to specific animal science needs at level 4 and 5. The underpinning knowledge is developed in the classroom and supported further with assessment, both formative and summative.

The assessment strategy promotes authentic learning and flexibility to equip students to work in this diverse field. Assessments are designed to allow students to develop subject specific skills and knowledge, and to research topics/species of interest linked to subject areas they would wish to specialise in and career aspirations. Feedback on assessment performance and feed forward advice is provided on all assessment activities to enhance student development and progression. This comprises mainly individual comments but also group feedback to the cohort so that generic issues such as technical writing and referencing skills can be enhanced. Formative assessment is designed to promote learning and allows students to become familiar with the expectations and requirements associated with assessment processes. Throughout the course there are many opportunities for formative assessment which provide constructive feedback (to feed forward) prior to summative assessment. Typically this includes practical work, informal in-class or online tests, discussions and peer review. These are designed to inform students of their own progress, allowing reflection on learning to identify strengths and weaknesses and to facilitate planning for success.

The students are expected to exercise increasing autonomy in their learning as they progress from Level 4 to Level 5 as preparation for progression to Level 6 Honours. Up take for the level 6 is high so it is essential that the learners are equipped with the research and evaluative skills that are required to succeed. Independent research, critical thinking and scientific objectivity is developed further at level 5 which prepares for the dissertation at BSc level. Students are supported with academic skills sessions in both year 1 and year 2 to ensure they are equipped with skills required for study at each level. Furthermore, students are prepared for the Level 5 Research Methods module through development of skills at Level 4 such as collection and review of data e.g. in Animal Health, Welfare and Nutrition.

Teaching and learning is informed by current scholarship in both educational and vocational practice, and typically has a strong multidisciplinary element to further enhance the more traditional research-led curriculum. Throughout the programme of study, students are supported by a highly skilled and passionate team of tutors.  These tutors all take part in regular industrial updating to ensure their knowledge and skills are current within their area of expertise.  Practice informed teaching ensures that students are given the highest quality of lessons throughout the programme. To support teaching and learning the team remain committed to their relevant industry sectors and have embedded good practise. One such recent development is the application and use of QR codes across the Animal Management Centre. This project is continuously evolving and will give HE students the opportunity to embrace technology both as a learner and facilitator through the use of online in-class quizzes, pod casts, audio clips and videos through our YouTube education channel. Technology is key to the learning opportunities available with embedded in taught sessions and though our VLE. Behaviour and Welfare students will have the opportunity to manage our animal collection on the Zoological Information Management System (ZIMS); an industry standard. The rebuild also has the provision for behavioural studies with equipment for video recording, CCTV and nocturnal observation.

One tutor sits on the ethical review committee of a major animal collection and is an active member of the British and Irish Association of Zoos and Aquariums (BIAZA) South-east region education panel. The teaching team all engage with their respective industries including animal cognition and learning, behavioural modification and wildlife management.

1. **Support for Students and their Learning**

Throughout the two year programme of study, students are allocated a personal tutor who is available to give support and guidance in relation to professional development, academic support and pastoral care.  In addition to this, Level 4 students can be supported by a high achieving Level 5 student mentor who assists with study skills, professional development and general academic queries. This mechanism was launched in September 2011 and feedback is positive and wholly constructive. The mentor gives a ‘real feel’ to the learning experience and is approachable as a peer.

Students are supported by:

* Module leader for each module studied
* Individual tutorials with the personal tutor and programme manager to support academic progress and personal development at least once per term
* Group tutorials to develop study skills and allow feedback
* A professional development coordinator to assist with placements
* Professional development and academic skills sessions timetabled weekly
* Additional learner support. Students are introduced to this department during induction and again during initial tutorials. This department extensively supports those students with a DSA and offers guidance to though needing to refine their studentship skills at level 4/5. This can be support with organisation, effective research or structural issues.
* Comprehensive induction and handbook issued
* Level 5 student mentor to support and guide Level 4 students where required
* HE centre for taught sessions and independent research
* Learning Resource centre and induction to e-learning
* Moodle site for course specific material
* Student Voice Committee
* Union of Kingston Students
* Careers Service supporting job application and CV development.
1. **Ensuring and Enhancing the Quality of the Course**

The University has several methods for evaluating and improving the quality and standards of its provision. These include:

* External examiners
* Boards of study with student representation
* Annual review and development
* Periodic review undertaken at subject level
* Student evaluation
* Moderation policies
1. **Employability Statement**

Graduates from this programme are entering a very competitive field where the importance of practical experience to support the qualification cannot be underestimated. Students are encouraged to become a student member of the British Society of Animal Science (BSAS). Each student is fully briefed on the limitations within the field and supported with their career path through the professional development module and the tutorial process. Each year level 5 students support the level 4 students with skills workshops that allow transferable skills to be taken into the work place.

Guest speakers and industry visits are integral throughout the qualification to ensure that each learner can explore the diversity of employment pathways or specialise further. Realistic assignments supported by industry links are praised by the external examiners. The professional development module provides an excellent platform for refining career choice and links to modules and practicals taught at Merrist Wood. A dedicated coordinator supports students to secure relevant placements and provides an excellent link to these providers.

Guest speakers normally include but are not limited to;

* Animal nutritionists
* Animal research scientists
* Animal physiotherapist
* Zoo vet

Industry visits typically include;

* Chessington Zoo
* Birdworld
* ZSL - London Zoo & Whipsnade Zoo
* Natural History Museum
* Pirbright Vet Labs (Institute Animal Health)
* Laverstoke Park

Many level 5 students continue onto level 6. Others seek employment within animal collections or follow an animal science route. Some follow a nutrition pathway and others secure research positions or roles working within the animal health sector or for organisations such as DEFRA.

1. **Approved Variants from the Undergraduate or Postgraduate Regulations**

There are no variants.

1. **Other sources of information that you may wish to consult**

Please visit the Unistats site ([www.unistats.co.uk](http://www.unistats.co.uk)) for our most current feedback.

**Development of Field/Course Learning Outcomes in Modules**

This map identifies where the field/course learning outcomes are summatively assessed across the modules for this field/course. It provides an aid to academic staff in understanding how individual modules contribute to the field/course aims, a means to help students monitor their own learning, personal and professional development as the field/course progresses and a check-list for quality assurance purposes.

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| **Module code** | **Level 4** | **Level 5** |
| SG4032  | SG4031 | SG4034 | SG4035 | SG5021 | SG5022 | SG5027 | SG5028 |
| **Knowledge & Understanding** | A1 | X |  | X |  |  | X |  | X |
| A2 | X |  |  | X |  |  |  | X |
| A3 | X |  |  | X |  |  |  | X |
| A4 | X |  |  |  |  |  | X |  |
| **Intellectual Skills** | B1 | X |  | X | X |  | X | X | X |
| B2 | X |  | X | X |  | X | X | X |
| B3 | X | X | X | X | X | X | X | X |
| B4 | X | X | X | X | X | X | X | X |
| **Practical Skills** | C1 | X |  |  | X |  | X |  |  |
| C2 | X |  |  |  |  | X |  |  |
| C3 | X |  | X |  |  |  |  |  |
| C4 |  |  |  | X |  |  | X | X |

**Students will be provided with formative assessment opportunities throughout the course to practise and develop their proficiency in the range of assessment methods utilised.**

**Technical Annex**

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| **Final Award(s):** | Foundation Degree |
| **Intermediate Award(s):** | CertHE |
| **Minimum period of registration:** | FT: 2 years PT: 4 years |
| **Maximum period of registration:** | FT: 4 yearsPT: 8 years |
| **FHEQ Level for the Final Award:** | 5 |
| **QAA Subject Benchmark:** | Agriculture, Forestry, Agricultural Sciences, Food Sciences and Consumer Sciences |
| **Modes of Delivery:** | 2 years full-time or 3 years part-time |
| **Language of Delivery:** | English |
| **Faculty:** | Health, Science, Social Care and Education |
| **School:** | Life Sciences, Pharmacy and Chemistry |
| **Department:** | Applied and Human Sciences |
| **JACS code:** | This is the [Joint Academic Coding System](https://www.hesa.ac.uk/index.php?option=com_content&view=article&id=1805&ItemId=296&limit=&start=#q10) (JACS) agreed jointly by UCAS and HESA |
| **UCAS Code:** | D3D3 |
| **Course/Route Code:** |  |